3. The apparatus as recited in claim 2, wherein the sample is supplied through the port to the sample cavity and then through the drain passage such that the apparatus is a sampling apparatus, the apparatus further comprising means for collecting the sample from the drain passage.

4. The apparatus as recited in claim 3, wherein the drain passage and internal wall of the body are generally flush and uninterrupted at the opening of the drain passage to the sample cavity.

5. The apparatus as recited in claim 3, wherein the opening of the inlet passage to the sample cavity is above the opening of the drain passage to the sample cavity.

6. The apparatus as recited in claim 5, wherein the longitudinal axis of the body coupled to the port is generally horizontal, wherein the longitudinal axis of the inlet passage forms an upward angle with a horizontal plane of generally at least 18.5° and wherein the longitudinal axis of the drain passage forms a downward angle with the horizontal plane of generally at least 3°.

7. The apparatus as recited in claim 5, wherein an angle between the inlet passage and the drain passage is a minimum of 21°, the inlet passage and drain passage fail to be horizontal and wherein the drain passage has at least a 3° downward angle with a horizontal plane when the apparatus is attached to the vessel or conduit.

8. The apparatus as recited in claim 5, wherein the body extends upwardly and wherein an angle of the longitudinal axis of the inlet passage with a horizontal plane is greater than an angle of the longitudinal axis of the drain passage with the horizontal plane.

9. The apparatus as recited in claim 1, wherein a generally horizontal plane passes through the longitudinal axis of the body, a first angle being formed between the longitudinal axis of the inlet passage and the generally horizontal plane and a second angle being formed between the longitudinal axis of the drain passage and the generally horizontal plane due to sloping of the inlet and drain passages with respect to the generally horizontal plane.

10. The apparatus as recited in claim 1, wherein an inner diameter of the drain passage is greater than an inner diameter of the inlet passage.

11. The apparatus as recited in claim 1, wherein the body has a generally cylindrical shape with an outer diameter of 25 mm or less.

12. The apparatus as recited in claim 1, wherein the drain passage has an internal diameter of generally 6 mm.

13. The apparatus as recited in claim 1, further comprising means for detecting abnormal operation of the device, the means for detecting comprising a probe with the probe being one of at least a temperature probe and a pressure probe, the probe being located in one of the body and the drain passage.

14. The apparatus as recited in claim 13, further comprising control means for controlling movement of the sealing tip of the bellows by the valve operating rod, the control means further including at least a part of the means for detecting, the control means storing recorded data from the probe and receiving current data from the probe, the data being at least one of temperature information and pressure information, temperature information being received if the probe is a temperature probe and pressure information being received if the probe is a pressure probe, the control means compares current data with recorded data to determine operating changes.

15. The apparatus as recited in claim 1, further comprising supply means operatively connected to the inlet passage, means for collecting sample flow operatively connected to the drain passage and means for collecting drain operatively connected to the drain passage;

the supply means supplying at least one of steam, air and a wash medium to the inlet passage, the sample cavity and the drain passage to thereby flush the inlet passage, sample cavity and drain passage, the sealing tip of the bellows closing the orifice when the supply means is activated;

the means for collecting the sample being closed to the drain passage when the supply means is activated and thereafter is open to the drain passage to receive the sample from the vessel or conduit after the sealing tip opens the orifice; and

the means for collecting drain being open to the drain passage when the supply means is activated and thereafter being optionally closed to the drain passage after the sealing tip opens the orifice, the means for collecting drain receiving the at least one of steam, air and wash supplied from the supply means, through the inlet passage, the sample cavity and the drain passage,

whereby said apparatus is used as a sampling apparatus to receive the sample from the vessel or conduit in the means for collecting while avoiding contamination of the sample due to the supply means and the means for collecting drain.

16. The apparatus as recited in claim 15, wherein the body has a generally flat internal wall at the sample cavity and wherein an opening of the drain passage to the sample cavity is generally flush, uninterrupted and without pockets for accumulation of the sample such that pooling of the sample between the sample cavity and drain passage is avoided.

17. The apparatus as recited in claim 1, wherein the sample is supplied to the port through the inlet passage, and wherein at least one of steam, air and wash medium is supplied to the sample cavity through the inlet passage such that said apparatus is a feed/inoculation apparatus, and the apparatus further comprising means for feeding the sample to the inlet passage.

18. The apparatus as recited in claim 17, further comprising supply means for feeding the at least one of steam, air and wash medium to the inlet passage and comprising control means for controlling movement of the sealing tip of the bellows by the valve operating rod, the control means closing the orifice with the sealing tip when the supply means is activated such that the at least one of steam, air and wash medium is fed through the inlet passage, through the sample cavity and out of the drain passage and wherein the control means opens the orifice when the means for feeding the sample is activated.

19. The apparatus as recited in claim 1, wherein the body is positionable such that the only portion of the apparatus in contact with an interior of the vessel or conduit when the sealing tip of the bellows closes the orifice is a side of the end wall facing the vessel or conduit and the sealing tip.

20. The apparatus as recited in claim 1, wherein the body is positionable as to extend into the vessel or conduit to thereby minimize the effects of stagnant layers within the vessel or conduit adjacent interior surfaces thereof and wherein the body has a plurality of grooves for sealing rings around a periphery thereof.

21. The apparatus as recited in claim 1, wherein the bellows is flexible and encloses the valve operating rod, the bellows having a plurality of folds.

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